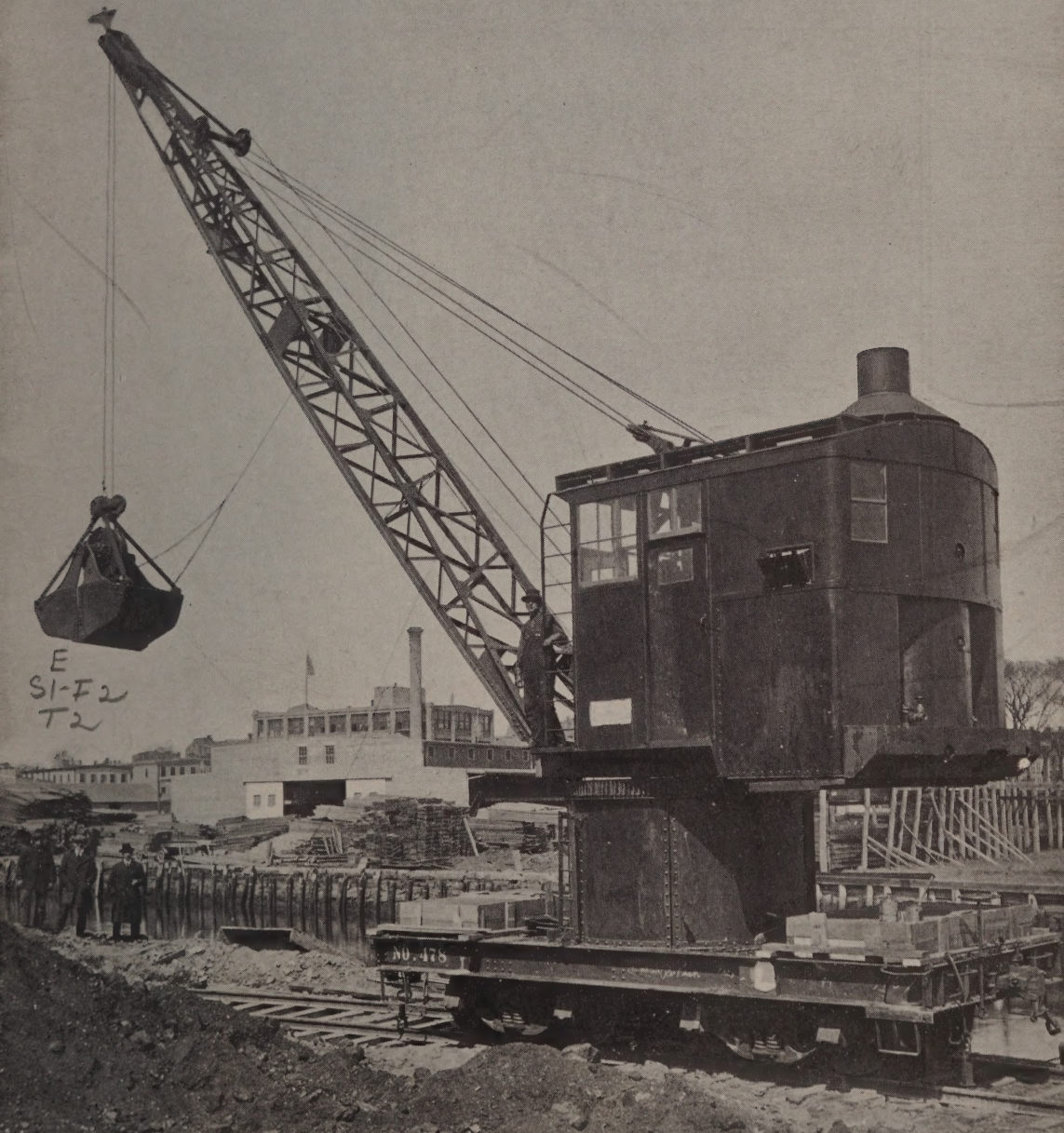
# TENNEY SERVICE

## MAY - 1917




15 TON LOCOMOTIVE CRANE
A RECENT ADDITION TO COAL HANDLING EQUIPMENT
OF SALEM ELECTRIC LIGHTING CO.

# TENNEY SERVICE

Vol. IV Boston, Mass., May, 1917 No. 5

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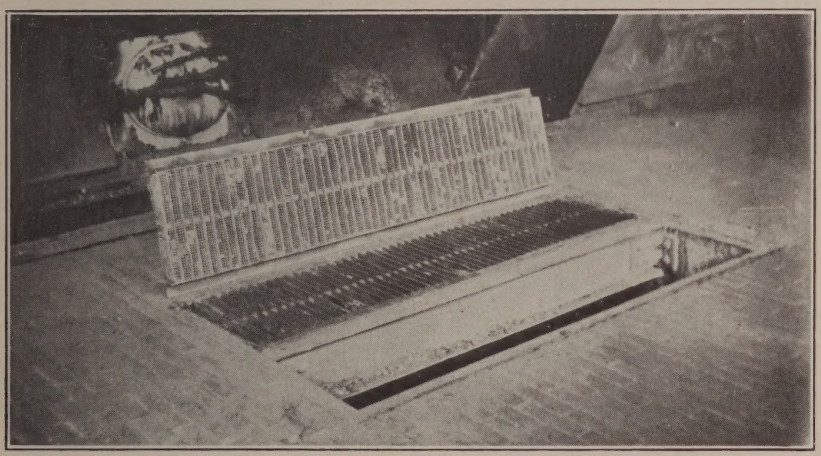
# ACCIDENT-PREVENTION WRINKLES

By R. S. Carter, *Supt.*
Malden & Melrose Gas Light Co.

THE accompanying photographs illustrate some ideas we have worked out to prevent the possibility of the recurrence of accidents.

PHOTO. No. 1.

Showing discharging hole in retort house floor in front of benches. Originally the holes were covered with a grating, the bars of which are spaced 1″ apart. A piece of hot coke fell through the grating and struck an employee on the back of the neck, causing a painful burn. A $\frac{1}{4}$″ mesh screen has been fastened to the other side of the grating, and this positively prevents the possibility of a recurrence of this accident. It also makes it possible to retain the purpose of the grating; namely to furnish ventilation to the retort house when charges are being drawn. Note small pieces of coke that have been caught by the screen.



NO. 1

PHOTO. No. 2

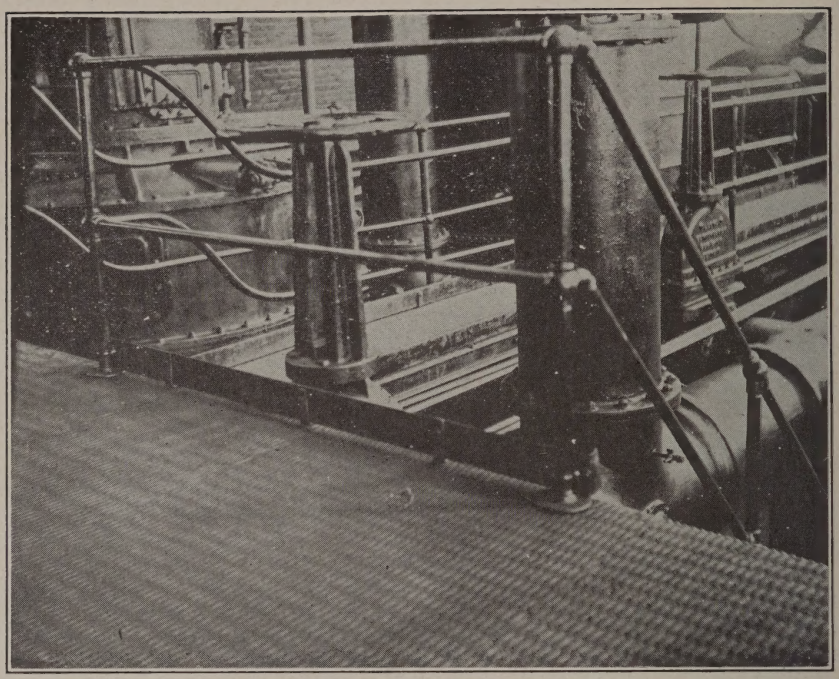
There is nothing new about the toe-board idea of preventing the chance of an accident occuring as the result of small articles dropping from a gallery to a work man below. We do, however, claim our construction of the toe-board is particularly substantial and does not in any way detract from the appearance of our exhauster room. The toe board is fastened so close to the floor that no tools could be pushed over the edge. It does not quite touch the floor, which facilitates cleaning.

ECONOMY

We also attach photographs which show clearly the possibility of a considerable saving in money, by repairing construction tools that might otherwise be consigned to the scrap heap.

PHOTO. No. 1-A

Shows a good size patch on a 30″ rubber gas bag. The bag originally was broken, as the result of a blister caused by the action of benzolized water on the rubber. The main where the bag was used



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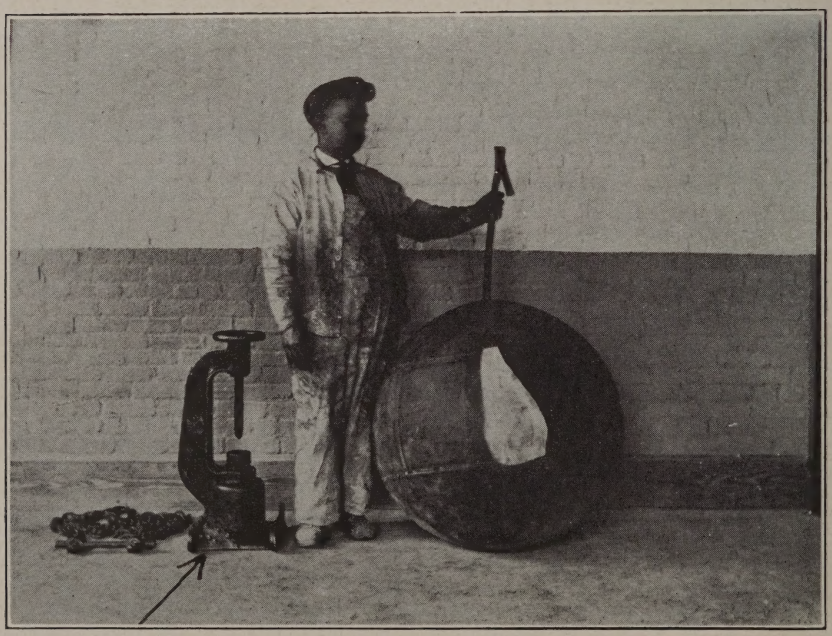
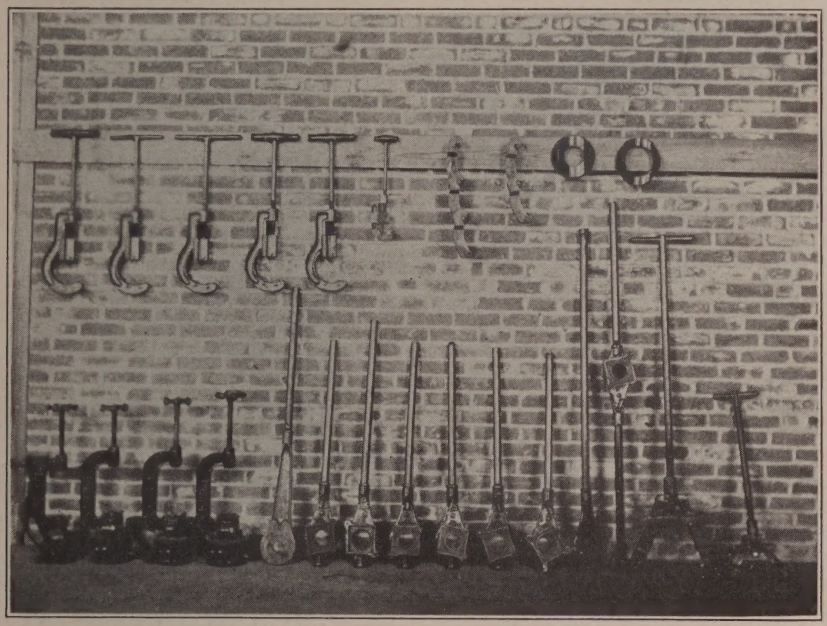


NO. 1-A

contained considerable moisture. The bag when new cost $30.00, and when the patch was applied it cost $1.00. It is interesting to know it was used the second time and broke in another place, from the same cause, the patch, however,

PHOTO. No. 2-B

This picture illustrates what we have done toward recovering tools. When repair parts were installed, they were given a general cleaning up and a coat of paint, it made the die stocks, pipe cutters, and tapping



NO. 2-B

remained intact. The large tapping machine shown in the same picture, was broken at the saddle. It was first thought that it would have to be "scrapped". The blacksmith bolted on a gas tight plate as indicated by the arrow, and saved the machine.

machines again fit for service. A great many combination taps and drills were put back into stock after cleaning off the rust and sharpening the drill. Over three hundred dollars worth of tools, bound for the scrap-heap, have been rescued and made serviceable.

# THE PRICE OF NATIONAL LIBERTY

By Arthur Twining Hadley

President of Yale University

Reprinted in Tenney Service through Courtesy of the Yale Alumni Weekly

THERE are two types of university: the English and the German. The English type has aimed to promote culture—physical mental, and moral. It has developed clean-living gentlemen, interested to a greater or less extent in books and studies, and with high ideals of public service. It has not attempted to train them directly for the struggles of life. Whatever they have learned in this respect they have learned elsewhere.

The German type of university has had other ends. It has aimed to promote efficiency. It has trained physicians and lawyers, engineers and technologists, to the practice of their several professions; it has done little for the general culture of the students, except as thorough study of any one subject gives a man an idea of what scholarship means on every line. But it has fitted the graduate to apply his abilities to the problems of life, whether at home or abroad, and to do modern work by methods in the particular field to which he has devoted himself.

Our American universities were first founded on English lines. They were originally colleges resembling the colleges of Oxford and Cambridge in purpose and in course of study. During the last century, and particularly during its latter half, German ideas of university education were introduced and German aims were given increasing measure of weight. A group of graduate and professional schools, whose object was technical training rather than general training, grew up about the colleges, and sometimes threatened to overshadow them. It has been the hope of our educational leaders that we might somehow combine the two ideals of university life—that we might in some way develop side by side the general culture of the Englishmen and the specific efficiency of the German.

The present war has brought the fact that these differences of university organization reflected a difference of national ideas. The Englishman's ideal is character; the German's ideal is performance. The Englishman desires to be a man among men, governed as far as possible by public opinion. The German desires to be an efficient part of an efficient organization, helping it to do its work better than any other organization ever did it before. The war is in fact a contest between these two types; and the underlying lesson of these awful years is that somehow the virtues of the two types must be conjoined instead of separated. The English type, left to itself, tends to go ahead gallantly and loyally but unintelligently. The German type, left to itself, tends to gain its immediate objects, intelligently and efficiently, but at the sacrifice of those habits of courtesy and morality which are the very basis of civilization.

It is sometimes said that wars are waged for commercial reasons. This may be true of little wars, but it is not true of great ones. Every great war establishes some principle. The wars of the French revolution

established the principles of civil liberty. The wars in the middle of the last century established the principal of nationality. I believe that this war will establish the principle that character and performance must go hand in hand; that morals and brains must go hand in hand; that morals and brains must be conjoined; and that a civilization which attempts to base itself on either to the exclusion of the other is fundamentally incomplete.

It is for us to take this lesson to heart as the shadow of war comes upon us. We tend to deal with everything emotionally; to demand the organization of an army of volunteers, without reference to the question whether it could be made efficient, or to pass a law for the training of half a million each year when we have barely officers enough to train a hundred thousand. This is not a time for haste, but for deliberation; a time to separate sharply the things that we can do from the things we cannot do; a time to lay plans for the future as well as for the present.

We can help Europe by naval activity, by the furnishing of supplies and money, by taking our full share in the work of keeping the seas open to commerce. We cannot directly help Europe by organizing a volunteer army. Accepting Kitchener's estimate of eighteen months as the time which it takes to get a volunteer army really ready for action,—and this estimate is confirmed by our civil war experience,—we could not expect our volunteers to render useful help to the Allies in their land fighting until the spring of 1919. If at that time the ocean is still open to our ships, the war will be ended; if it is not open to our ships, we cannot send the army. The organization of our land forces must be directed, not to the supposed possibilty of taking part in the European struggle, alluring as this is to loyal minds, but to the more prosaic task of creating a permanent system of national defense. We must increase the Regular Army, in order to make it strong enough to do all the ordinary police work and constitute the first line of defense. We must increase our number of officers, in order that we may have teachers for our reserves. We must adopt some system of universal training to supply an effective second line of defense against enemies abroad, abetted as their efforts may be by the disloyality of a few of our people and the apathy of a great many. Our militia is zealous and self-sacrificing; but the experience of last summer shows that it is too weak to furnish an effective support to the Regular Army. A volunteer army of untrained men could not be ready in time to meet an emergency. We must have trained men on whom to call, and trained reserve officers to command them. I believe that every boy reaching the age of nineteen should be enrolled and instructed, either as a soldier or as a worker, under military discipline, in some line of duty like ambulance service, munition making, or railroad operation. I would not compel every boy to learn to fight; but I would compel every boy to learn what he could do for his country in an emergency, and do it when called upon, under public authority and at a soldier's wages. By means like this we should have preparedness without militarism.

These are the lines on which the Germans would deal with the problem before us. We may not like them; in fact nearly every one will object to them for some reason. The extreme peace men will dislike

them, because they do not want to fight before we are ready. Those who hold to the traditional belief in volunteers to meet each emergency as it arises will object to a system that insists on the importance of preliminary training. But we cannot afford to let any of these groups remain blind to the facts because of their traditional prejudices. Modern improvements have made the Atlantic Ocean a far less effective protection to us than it was fifty years ago. We are brought into closer political contact with other nations. We are like a new boy in a boarding school, who has to show what there is in him or else be kicked into the corner. If we say that we do not like fighting or that we prefer to fight inefficiently, that excuse will not be allowed to pass current. Not only eternal vigilance, but effective political and military organization, is the price of liberty to-day.

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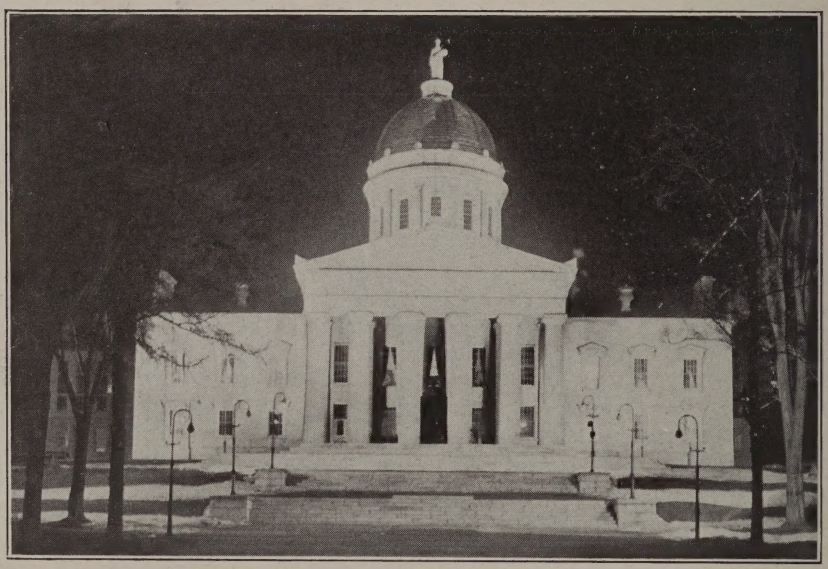


FLOOD LIGHTING—VERMONT STATE HOUSE AT MONTPELIER, VT.

# THE FAILURE OF GOVERNMENT OWNERSHIP

From the Annual Report of the American Telephone & Telegraph Co. for the Year 1916

CONTRIBUTED BY PALMER YORK

THERE are, in various quarters, movements to nationalize or municipalize the telephone service. In favor of these movements, the advocates are using the same arguments and promises, the same statements of possible cheaper service, lower cost of construction, cheaper capital because of low interest on good securities, the same cry of monopoly and extortion, that have been used in the past in favor of public ownership, all of which have over and over again been proved to be fallacious and impossible.

There is no reason why any individual or public official—national, state or city—should be misled by any statement in respect to the telephone business. There is hardly a district in the United States in which there has not been an opposition company promoted onsubstantially these same promises and statements. Yet, even where the plant has been of the cheapest and most flimsy construction and of the most primitive character, and the service far from being dependable, not one of these opposition companies has made good, on the basis of the promises made. There is hardly one of these now in operation whose average book cost is not higher than that of the system, whose rates are not higher than orginally promised, and which has not frankly conceded that business cannot be maintained on the terms and conditions of its prospectuses.

To ascertain the real facts, and expose the utter fallacy of the statements and promises, there would be necessary only a very little examination, a very little reflection, and a very little common sense, unbaised and unprejudiced.

With a cheaply constructed, cheaply operated rural plant, a fairly satisfactory rural local service can be given at a low cost. There are tens of thousands of such plants now in operation, independent of the Bell system, or connected with it and giving local or limited service.

With urban systems, or systems intended to be used in connection with urban and toll line systems, the construction must be of the highest order, the wires mostly underground, the service must be maintained at the highest standard such as will afford good conversasation, not only locally but to the extreme limits of the system with which it is connected. For long-distance service or for connection over the whole of the Bell system a cheap, poorly constructed plant would be impossible.

It does seem very singular that the experience of the Northwestern Canadian provinces in government ownership and operation is so entirely ignored by all those who advocate it. The facts are well known; they are not disputed; it is easy to get them. Influenced by the same arguments and the same promises that have been made by all advocates of public ownership and by all the promoters of so-called competing home or local companies, the provincial governments in Western Canada purchased the local plants. Farmers' lines were to be constructed all over the country, rates were to be cut, etc., etc. No one single promise has been kept or carried out; there has been

less extension than with the private company; rates have been raised and rural service neglected, if not ignored. This is history, public and open to all who desire information.

It is believed that the carrying charges on government obligations that would be required to pay for the Bell system property at a fair valuation would in the long run cost the public more than the present carrying charges of the Bell system, allowing for the enormous and increasing taxes paid under private ownership that would be lost to the public under government ownership.

## THE FINAL CONNECTION BETWEEN THE GOVERNOR HOUSE AND THE DISTRIBUTION SYSTEM

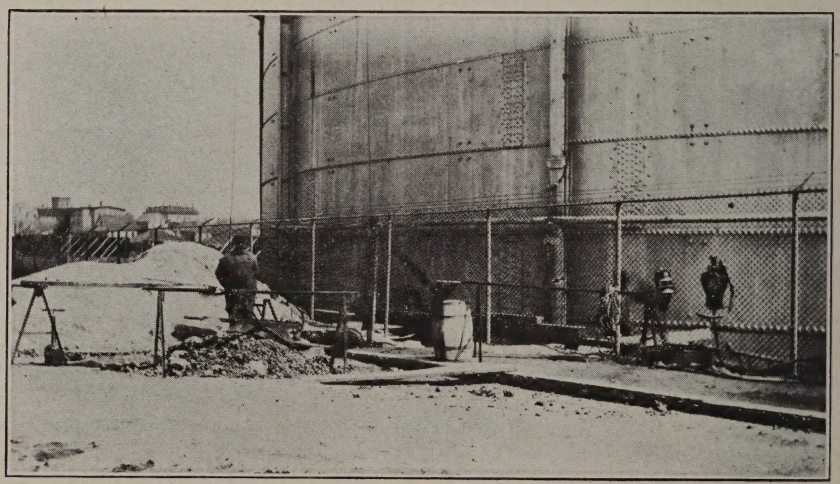
By R. S. Carter

Superintendent, Malden & Melrose Gas Light Co.

ABOUT a year ago it was found necessary to rearrange our holder piping system and install for emergency purposes new 24 automatic and balance governors. At the same time, it was decided to locate the housing for a water gas and coal gas Thomas electric meter in the same building with the governors.

To complete the pipe connections in the meter and governor house with the customary by-passes, it required the installation of twenty-three flanged valves.

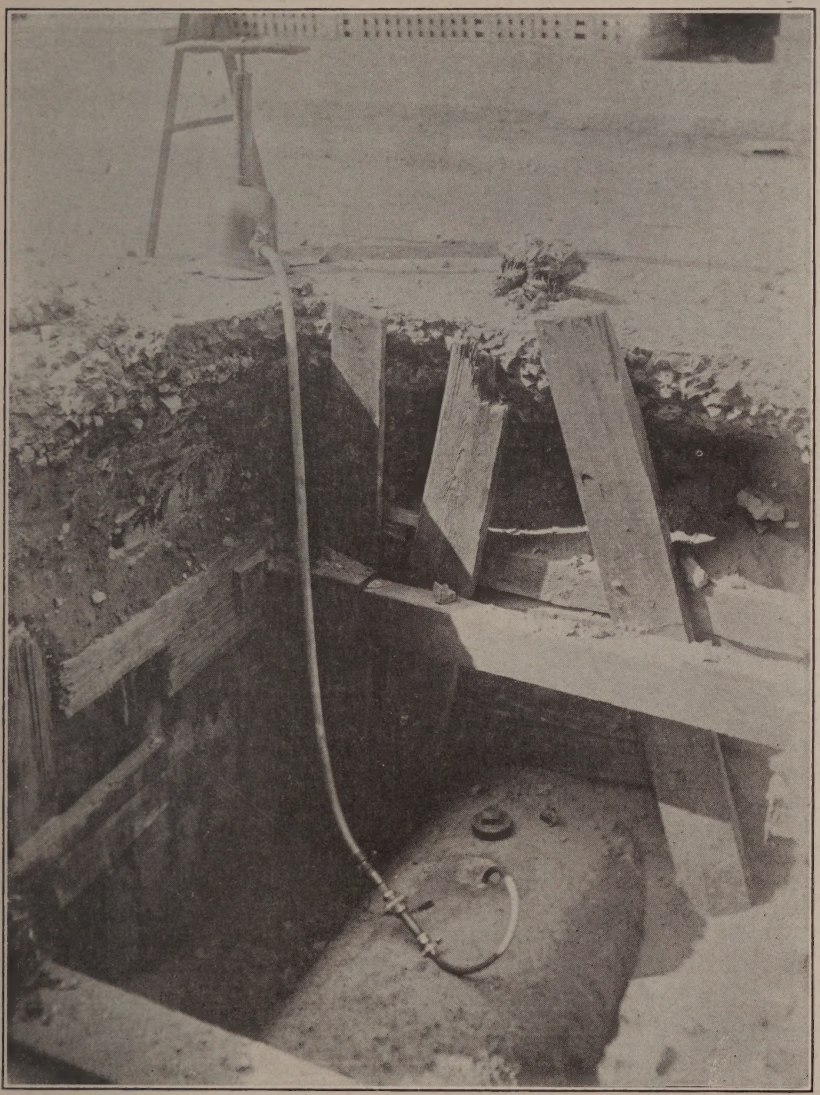
With the old lay-out of piping, there was only one outlet to the main distribution system; and while it served its purpose for a number of years, it was located directly under the foundation of the two million-foot storage holder as shown in the accompanying photograph. In the event of the necessity for repairs to the line, its location made it impossible to examine the pipe



NO. 1

and joints, and for this reason it was decided to abandon this line entirely.

mains, a number of large connections and pipes were laid in the holder lot.

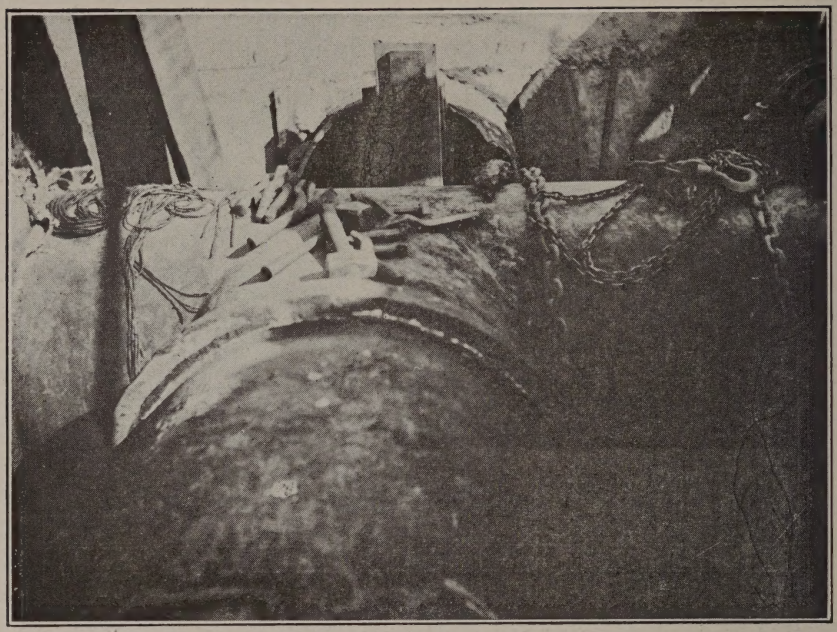


NO. 2

In view of these circumstances; coupled with an urgent and growing need for a more accessible and adequate supply pipe to the street

The particular connection to which this article refers is the one marked "A" in exhibit no. 1.

The importance of executing the



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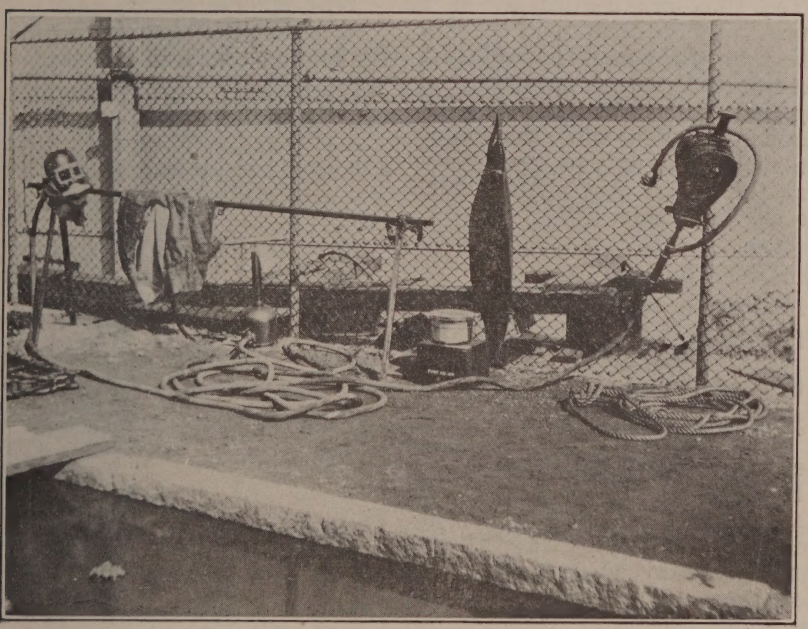

NO. 6

work with the utmost dispatch, and under the safest possible working conditions may be fully appreciated when it becomes known that the cutting in of the 30″ tee necessitated bagging-off and breaking into the main trunk line to the entire distribution system.

All the men who contributed in putting the job through realized that the demand of 35,000 customers must be supplied without interruption. The safety of the men engaged in the work also required forethought and careful planning.

The working out of the details in connection with a job of this kind would add but little if any interest to this article, and the accompanying photographs will be sufficient to show the precautions taken and the general method of handling the work.

## EXHIBIT NO. 1.

This photograph illustrates in a general way the location of the job. The duty of the man shown in the picture consisted of watching the bag and stopper to see that they were kept in place while the end of the main was opened up. Note that the "First Aid" equipment, is easily accessible.

## EXHIBIT NO. 2.

Showing a 30″ canvas covered bag inserted in the main through a 4″ hold. The bag was inflated with a service pump, and the air was held in the bag by means of a ¾″ hose cock securely fastened to the stem.

It may be interesting to know that on account of the oily water in the main at the point where the tap was made, a canvas-covered bag was used because the solvent action of this water on rubber causes it to blister and burst. As a further precaution in case the bag did break, an extra one was kept available.

## EXHIBIT NO. 3.

This photograph shows the 30″ stopper placed behind the bag as extra insurance against the possibility of an accident resulting from the bag bursting. The picture also shows the tee in place with a cap on the spigot end of it.

The time required to cut pipe of this size with the ordinary pipe cutter, and as it is installed in the line, made it necessary to divide the work into parts; setting the tee one day, and making the final connection the following day.

## EXHIBIT NO. 4.

This photograph shows another view of the tee as explained above. The end view of the broken pipe is the one that ran under the holder foundation, and is the line we finally abondoned.

## EXHIBIT NO. 5.

This picture shows clearly the final connection made by means of the regular cast iron sleeve.

## EXHIBIT NO. 6.

All "First Aid" equipment was inspected before the job was started and consisted of the following articles:—

First Aid Jar and Contents.

Gas Proof Helmet, Pump and Hose Connections.

Life Rope.

When the connection was completed it was necessary of course to purge all the air from the line which is about 300 feet long. This was accomplished by inserting a piece of 2″ pipe into the hole through which the stopper has been placed, the lower end of the pipe extending down into the main within 2″ of the bottom. It required forty-five minutes to completely clear the line, and the gas was furnished through one of the operating valves in the governor house.

## MAN-MADE SUNSHINE

(From the Gas Age)

When Robinson Crusoe first lived on his desert island he didn't have to be polite to any one. He never had to say "please," or "thank you," or give up his seat to ladies, or refrain from expressing his feelings at any time or in language that he saw fit. Courtesy meant nothing at all in his young life, but he was mighty lonely.

And when he was the loneliest and wanted companionship the most, along came Friday, who if only a savage was nevertheless human. He had Friday to please as well as himself, for there were two sides to the Island and if Friday didn't like the kind of treatment Crusoe handed out he emigrated and left Crusoe as lonely as ever.

And so the comfort and convenience of his companion began to play a part in his conduct. He couldn't hog all the choicest morsels at meals for fear Friday would quit; couldn't practice on the tom-tom or whatever musical instrument he affected, when Friday wanted to sleep, and there were a lot of other things he couldn't do.

He was paying the price of companionship.

That's what courtesy is.

It's the coin we pass out for the privilege of living with other human beings.

The bigger the crowd the more there is to pay.

Man, being by nature a systematic and orderly animal, has through the years he has lived together in droves, formulated a code of courtesy rules.

There are certain things that the courteous man must do.

Everyone knows these rules, or if he doesn't and can't remember, let him memorize the Golden Rule: "Do unto others as you would have others do unto you." That embraces them all.

It is a reciprocal arrangement for making life in large communities not alone pleasant but livable.

It is the only debt that no man is too poor to pay.

It is man-made sunshine.—*Area.*

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# EDITORIALS

LEVIN J. CHASE, *Contributing Editor*

## A GOOD RULE.

THE golden rule is one that may well be enforced by a public service corporation in its relation with the public. It is the one rule that cannot be broken without loss, and its rigid enforcement will never excite the hostility of the public. Its application among men who are working together for a common cause will make the work easier and more effective. It is a kind of divine co-operation which teaches peace, goodwill and justice for all mankind. It does not mean the spurious meekness of the milk and water brotherhood, for the one who has the courage to do as he would be done by must have red blood in his veins. He must be able to face ridicule, injustice, calumny and disappointment with cheerful indifference, and this quality is only found in those who measure up to the full standard of a man. The golden rule is the very essence of a glorified and perfect humanity, and its wisdom was taught many centuries before the Christian era. Even the so-called heathen, Confucius, gives us a glimpse of the truth when he says: "Do good that ye may deserve good; return benefits for benefits; return injuries with justice and without any admixture of revenge."

## SPRING — 1917.

THIS promises to be a marvelous spring for the United States. The government is making plans to raise an army of millions and is urging those who are unable to bear arms to raise vegetables.

And if everybody plants who plans to plant, every foot of tillable ground will groan with increase.

Many a man will wrestle with the stubborn glebe this spring, who never ploughed before.

At a public meeting in Concord a few nights ago, an eminent Espicopal divine announced that the beautiful lawn which surrounded his church had been ploughed and would be planted with potatoes. He added that no ground was too sacred to plant potatoes in the spring of 1917.

Then up from your swivel chairs and dig! The man who cannot carry a rifle can wield a hoe. If the pen is mightier than the sword, the hoe is mightier than the golf club.

And a spade is not as heavy or as deadly as a machine gun nor is it as dainty as a tennis racket.

Consequently the garden volunteers are rushing to the front and the sound of creaking joints is heard in the land. Everybody will do something to relieve the probable food shortage except the sick and supercilious.

And speaking of volunteers reminds us that about a year ago a distinguished pacifist and former advocate of freedom for silver at the sacred ratio of 16 to 1 made the statement that if this country was threatened with war a million men would "spring to arms over night."

Well, some weeks have passed since Congress declared the existence of war and we seem to be having a late spring.

In these days the male populace does not spring to arms, Moreover. there are no arms to spring to. In 1862 our sturdy ancestors sprang to their Springfields but not in sufficient numbers until the introduction of a more or less selective draft.

The volunteer system as applied to armies is a picturesque humbug and it remains to be seen how it will serve when applied to the wholesome art of agriculture. We believe that it will succeed.

Furthermore, we believe that the Spring of 1917 will be a poor season for slackers. Our country has entered into war with a nation composed of highly specialized barbarians and the nerve of the nation will be tested to the limit.

Needless to say the government expects every man to do his bit in work and sacrifice, and let us hope that posterity will point to us with the same degree of pride that we cherish for the herioc generations of the past.

# PRINCIPLES OF SELLING

## Rollo and Jonas Take a Walk.

Contributed by Willard Hall

Chairman, Advertising and Publicity Committee, N. E. Section, N. E. L. A.

(This is the first series of a dialogue prepared by the publicity committee of the New England section of the N. E. L. A. Any individual may receive the entire series free for the asking if he is a member of the National Electric Light Association. The charge to non-members will be $3.00 for the series. The address of the Association is 149 Tremont St., Boston, Mass.)

IT is twenty years or more since we left Rollo and Jonas in their country home, and now we find them in a big city and still on as friendly terms as ever.

Jonas is the advertising manager for a large manufacturing concern, while Rollo aspires to become the new business manager for the electric lighting company which he serves.

One warm evening in the spring, Rollo and Jonas started for a stroll down one of the main streets of the big city when Rollo noticed a small crowd gathered on the corner.

"There must be a fight," said Rollo, "let's see what it's about."

So he and Jonas soon found themselves looking down on a man who was kneeling on the pavement. Before him lay a block of wood and on this he was carving the figure of a horseman with a penknife. Suddenly the knife slipped from his hand and struck the pavement.

Regaining it, the kneeler continued with his work, but at once arose with an expression of annoyance on his face and addressed the crowd.

"Gentlemen, my knife is dull. Will one of you lend me your knife sharpener?"

No one answered.

"What!" said the man, "is it possible that no one in this crowd has a knife sharpener?"

Still no answer.

"Well, I can remedy that," and immediately he whipped open a little satchel hanging at his side and began to demonstrate and volubly explain the merits of a pocket-knife sharpener.

"By George," said Rollo, "that's a clever little contrivance and I am going to buy one, seeing as how it only costs a dime."

The lynx-eared hawker got the remark almost before it left Rollo's lips, and Rollo suddenly found a small parcel in his hand in place of the dime which he had just drawn from his pocket. As they turned from the crowd a quiet and superior smile played around Jonas' mouth. (Jonas always was a very superior smiler.)

"What are you grinning at?" said Rollo.

"I was just smiling at the ease with which that hawker sold you the knife sharpener," said Jonas.

"He didn't," said Rollo, "he didn't sell me anything. I bought the knife sharpener of my own free-will."

"That's the way it seems," said Jonas, "but at the same time, you went through a definite mental process when you bought that little article, and the hawker has the science of salesmanship down to a fine point," said Jonas.

"Explain what you mean."

"Well," said Jonas, "in the first place the man had to do something to attract you to him."

"Sure," said Rollo.

"And the thing that he attracted was your ATTENTION," said Jonas, "so there is a self-evident proposition. To sell a person anything you must first gain their ATTENTION."

"Now," said Jonas, "having firmly gained your ATTENTION and riveted it on his actions, the man very rapidly began to explain and demonstrate his knife sharpener. In other words, having gained your ATTENTION he did everthing in his power to INTEREST you in his article before your ATTENTION was attracted by something else. While gaining your INTEREST he also endeavored, and did create in your mind, a DESIRE to own one of those little things, and this DESIRE was strong enough on your part to make you spend a dime to own it."

"Well," said Rollo, "that all seems clear enough, but I wasn't conscious of going through any such mental process."

"Quite true," replied Jonas, "the process was perfectly natural, and if you had been conscious of going through any mental process your purchase of the article would probably not have resulted."

"Still," said Rollo, "I don't think your argument about the mental process would hold true in every case. Suppose that I had desired to buy the Saturday Evening Post there on the news stand. Let's see you resolve that into a mental process."

"Very well," said Jonas, as they paused before the news stand. "Just look at all of these magazines that you see before us and tell me what is the first thing that strikes your eye."

"The pretty pictures on the covers," said Rollo.

"Just so," said Jonas, "and those pretty pictures are put there for just one purpose, and that is to make the magazines; attractive in other words, to attract your ATTENTION, which is the first step in the process of a sale."

"All right," said Rollo, "I'll admit your point. These pictures catch my ATTENTION but they don't INTEREST me particularly."

"No," said Jonas, "but look at the Saturday Evening Post cover there In big, black letters you see the statement, 'Over 2,000,000 circulation a week.' Now that implies to you, although you may not have thought of it, the fact that if that many people read The Saturday Evening Post weekly it must contain good reading matter; and again, you will see that they have printed the names of the authors of the various stories in this issue of the Saturday Evening Post right on the cover in hopes that one of these authors is a particular favorite of yours, and that you desire to read all his stories."

"By Jove, you're right," said Rollo.

"Now," asked Jonas, "has The Saturday Evening Post caught your ATTENTION and INTERESTED you?"

"Yes, I guess it has," replied Rollo.

"You, of course, know how to read," continued Jonas, "and you enjoy reading interesting stories, so if your INTEREST is awakened by seeing a magazine which has a very large circulation and which contains stories by your favorite authors, it is only natural that you should

DESIRE to own a copy of this magazine, and would, therefore, immediately buy one."

Rollo walked along in deep thought. Suddenly a neswboy darted out from the corner and flashed before their eyes the scare headlines of an extra.

"BIG FIRE IN THE SOUTH END," bellowed the youth as only newsboys can.

"What's that," said Rollo, coming out of his brown study with a start, "here boy, give me one," as he snatched the paper out of the urchin's hand and gave him a penny.

"That was certainly a quick sale," remarked Jonas. "The ATTENTION (the newsboy's yell); INTEREST (the scare headlines); the DESIRE and RESOLVE (you wanted to know more about it at once) were almost simultaneous, and yet you went through the entire mental process of ATTENTION, INTEREST, DESIRE and RESOLVE which constitute the mental journey of a sale."

Rollo broke out laughing. "Well, Jonas, you're too smart to live; they ought to have you in a glass case somewhere."

"But my dear Rollo, this is not smartness, this is human nature, and every sale, no matter what, can be analyzed just as I have done."

Rollo was unusually silent for the balance of that evening, which was a true sign that he was thinking. Finally, turning to Jonas he said. "Your remarks on selling, tonight, have interested me very much, and would you mind going over again this mental process of a sale which we have been talking about?"

"Why sure," said Jonas. "Now listen closely and I will see if I can make this all clear."

"In any sale there are four mental steps. First, the ATTENTION of the person is attracted, then the INTEREST of the person is awakened, this changes to DESIRE, and finally, comes the RESOLVE to buy. Now, between these four mental steps your prospective buyer must be educated. You have got to tell him why he should buy a thing, how it will help him, and give him just as many reasons as possible to lead him along the journey from ATTENTION to RESOLVE.

"Sometimes ATTENTION and INTEREST may be almost simultaneous, with RESOLVE slower in coming. Again, as you saw tonight, the four steps may be passed through in a very short time. Now, let's consider each step individually. Just what is our mental state when we arrive at the various points?

"ATTENTION is the first and easiest. An electric sign, an unusual picture, a striking announcement, in fact almost anything from a loud noise to a horrible smell will attract ATTENTION. But having secured this ATTENTION we must work swiftly with our educational process to hold it. We must tell the prospect in a general way what we have to offer and how good it is, and thus try to awake his INTEREST before his ATTENTION wanders.

"Having secured his INTEREST we may rest on our oars for a moment while we study the individual needs of our prospect. Here is where personal selling comes into its own. The salesman acquires an intimate knowledge of his prospect's conditions and is able to give him individual attention and service which finally brings our prospect to the point of DESIRE.

"Theoretically, DESIRE and RESOLVE should be simultaneous as is frequently the case with ATTENTION and INTEREST, but conditions, over which the seller has no control, sometimes prevent this instantaneous action. The price of the article may seem too high, or perhaps he's hard up. Sellers try to overcome this point by selling their product on the partial payment plan, such as books, vacuum cleaners, real estate, etc.

"Summing up, Rollo, the educating process that constitutes a sale and which changes one mental state into another until the point RESOLVE is reached, can be condensed as follows:–

"Between ATTENTION and INTEREST we must have sharp, quick action, but our arguments or truths may be of a general nature. From DESIRE to RESOLVE is but a short step, one usually merging into the other without effort, unless financial obstacles impose. But between INTEREST and DESIRE is where the long, hard pull is apt to come. Where, the Why, the What, and the Wherefore; the individual application of our product, the best arguments of our salesman (be he in print or in person) must be brought logically and forcibly before our prospect."

## "CO-OPERATION"

From Pacific Service Magazine
Contributed by Palmer York

IT is often said that man should be adapted for the work he undertakes. However, this seldom occurs. Man more often finds that it becomes necessary for him to adapt himself to the environment.

We are now in the age of specializing. But we cannot assume to stay within too small bounds. We must branch out, see what the other fellow is doing; learn what part the other departments play in our organization. As it were, we must keep in touch with all branches of the service.

Business is nothing more or less than supplying one another's wants.

Let us assume that each individual in the employ of the company is a salesman. Every man has something to sell, perhaps his services, possibly experience, or, maybe, the goods we manufacture and supply.

From the laborer to the general manager, we are all concerned in the sale of our products. We aid in producing; why not aid in disposing of them.

While it may be true that each man in the organization does not come in direct touch with the buyer or user of our products, still nevertheless, he, in his individual capacity, aids in making up that which we present to the public. The salesman who solicits the business of a prospective consumer must feel confident that each member of the organization is co-operating with him.

We must not lose sight of the fact that the consumer pays our salary. He is the one that is most affected by the service rendered.

Today we find that most executives are taken from the ranks of the workers; men who have started young and gained a practical experience. Men who succeed must be ambitious. They must be interested in more than their particular line. They make a study of the business in which they are engaged.

The employee who helps to perpetuate business is never jobless. As the business grows so the jobs grow. Men get big jobs by making little jobs bigger.

## THE KID HAS GONE TO THE COLORS

By W. M. Herschell

From the *Indianapolis News*

The Kid has gone to the Colors
And we don't know what to say;
The Kid we have loved and cuddled
Stepped out for the Flag today.
We thought him a child, a baby
With never a care at all,
But his country called him man-size
And the Kid has heard the call.

He paused to watch the recruiting,
Where, fixed by the fife and drum,
He bowed his head to Old Glory
And thought that it whispered: "Come!"
The Kid, not being a slacker,
Stood forth with patriot-joy
To add his name to the roster—
And God, we're proud of the boy!

The Kid has gone to the Colors;
It seems but a little while
Since he drilled a schoolboy army
In a truly martial style.
But now he's a man, a soldier,
And we lend him listening ear,
For his heart is a heart all loyal,
Unscourged by the curse of fear.

His dad, when he told him, shuddered,
His mother—God bless her!—cried;
Yet, blest with a mother-nature,
She wept with a mother-pride.
But he whose old shoulders straightened
Was Grandad—for memory ran
To years when he, too, a youngster,
Was changed by the Flag to a man!

## THE FLAG

The flag of our stately battles,
not struggles of wrath and greed,
Its stripes were a holy lesson,
its spangles a deathless creed:
'Twas red with the blood of freemen,
and white with the fear of the foe;
And the stars that fight in their courses,
'gainst tyrants its symbols know.

The Flag—*Julia Ward Howe.*

A song for our banner! The watchword
recall.
Which gave the Republic her station:
"United we stand, divided we fall!"
It made and preserves us a nation!

The Flag of our Union—*G. P. Norris.*

Flag of the free heart's hope and home!
By angel hands to valour given!
Thy stars have lit the welkin dome,
And all thy hues were born in heaven.
Forever float that standard sheet!
Where breathes the foe but falls before us,
With Freedom's soil beneath our feet,
And Freedom' banner streaming o'er us.

The American Flag—*J. R. Drake.*

One flag, one land, one heart, one hand,
One Nation evermore!

Voyage of the Good Ship Union
—*O. W. Holmes.*

If any one attempts to haul down the American Flag, shoot him on the spot.

An Official Despatch, Jan. 29 '61—*John A. Dix*

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Let us then twine each thread of the glorious tissue of our country's flag about our heartstrings; and looking upon our homes and catching the spirit that breathes upon us from the battlefields of our fathers, let us resolve, come weal or woe, we will, in life and in death, now and forever, stand by the stars and stripes. They have been unfurled from the snows of Canada to the plains of New Orleans, in the halls of the Montezumas, and amid the solitude of every sea; and everywhere, as the luminous symbol of resistless and beneficial power, they have led the brave to victory and to glory. They have floated over our cradles; let it be our prayer and our struggle that they shall float over our graves.

*Henry Ward Beecher.*

# The Flag Goes By

Hats off!
Along the street there comes
A blare of bugles, a ruffle of drums,
A flash of color beneath the sky:
Hats off!
The flag is passing by!

Blue and crimson and white it shines
Over the steel-tipped, ordered lines.
Hats off!
The colors before us fly;
But more than the flag is passing by.

Sea-fights and land-fights, grim and great,
Fought to make and to save the state:
Weary marches and sinking ships;
Cheers of victory on dying lips;

Days of plenty and years of peace;
March of a strong land's swift increase.
Equal justice, right and law,
Stately honor and reverend awe.

Sign of a nation, great and strong
To ward her people from foreign wrong.
Price and glory and honor,—all
Live in the colors to stand or fall.

Hats off!
Along the street there comes
A blare of bugles, a ruffle of drums;
And loyal hearts are beating high;
Hats off!
The flag is passing by!

—Henry Holcomb Bennett

*Boston Transcript*

# TENNEYGRAMS

## HAVERHILL ELECTRIC CO.

THOMAS D. BOND, *Correspondent*

We have just had a 60-egg electric incubator running in our office recently, which has caused quite a lot of interest. A meter prominently displayed over the incubator shows what the cost has been.

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The new Haverhill battery is rapidly being recruited. A number of the boys from this office have helped by assisting in signing up applicants. This station is directly across the street from our office.

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Our station is under guard, necessitating the use of passes if an entrance is desired. Employees are required to use passes, as the four guards cannot be expected to remember all faces.

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The new incandescent series street lamps are proving to be a very satisfactory method of street lighting. We have had very few burn-outs; in fact only two since they were installed.

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"Micky" McFadden, who has been taking care of the arc lamps in the past, has been transferred to the stock house, where he will keep things looking in ship-shape condition. Micky has been with our company about seventeen years. Stockroom assistant, Michael Patterson, has accepted a promotion and is to have charge of the new garage, taking the place made vacant by the resignation of Lester Balser.

---

The annual meeting of the Haverhill Electric Company's Employees' Relief Association was held on the evening of March 19th, when the officers of last year were again elected to serve the coming year.

The officers are as follows:

*President*—JAMES E. FRANK
*Vice-Pres.*—S. S. SHAPRLES
*Secretary*—PAUL L. MURPHY
*Treasurer*—THOMAS D. BOND

*Trustees:*

W. W. BUNCE
C. W. GORDON
C. E. HAZELTINE
W. K. GRAY
W. F. O'REAGAN

The report of the treasurer was then read, showing the association to be on a sound financial basis:

| | | |
|---|---|---|
| Bal. March 1, 1916 | $ 81.16 | |
| Dues Collected | 189.00 | |
| Interest | 1.85 | |
| Assessment | 32.00 | |
| | | $304.01 |
| Paid Sick Benefit | $131.00 | |
| Paid Death Benefit | 32.00 | |
| Surplus | 141.01 | |
| | | $304.01 |

Two new members were elected to membership; these are William M. Bunce and George S. Edmonds; our present membership is 29.

---

The Haverhill Electric Educational Club had the pleasure of hearing Ass't. Chief Hawkins, of the Haverhill fire department, on Monday evening, April 2nd. Chief Hawkins took for his subject "Fire Prevention and Methods Used in the Haverhill Fire Department." Many questions were asked, which the chief kindly answered to the satisfaction of all.

The final meeting of a very successful season will be held probably at Smythe's hotel, May 7th, where a banquet will be served. Victor Gallison, who has served in the U. S. Navy, will speak on "Life in the Navy."

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The March meeting of the Haverhill Electric Club was held at the Colonial Theatre, where the General Electric Film "The King of the Rails," was shown. It is a very interesting five-reel picture and was well received by the general public. After the show everyone went to the clubroom at the plant, where a light lunch was served by the entertainment committee.

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Manager F. L. Ball spoke at the Men's Forum of the First Universalist Church recently, on the development of the electrical industry in Haverhill.

## SUBURBAN GAS & ELECTRIC COMPANY

H. M. Frank, *Corresponednt*

Messrs. William I. Macaulay and Sam Lessar are doing day and night guard duty at our plant.

We have installed an 8-ft. wire fence around the grounds at the plant, taking in the station and all of the buildings.

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After numerous demonstrations of spot lights to be used on Revere Beach Boulevard, the Metropolitan Park Commission has ordered four General Electric spot light reflectors with 250 C.P. lamps for lighting the crossings between Shirley Avenue and Revere Street.

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Manager Chisholm intends having the lawn at the works ploughed up and use the land for planting all kinds of garden truck.

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The last regular meeting of the season of the Suburban Gas & Electric Club was held on Tuesday evening, April 17th. All regular business was suspended and the evening given over to a social time to which the lady employees of the company were invited.

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The supper which was prepared by Messrs. Frank and Tomkinson was served at 6.30 p.m. with the menu as follows:–

Escalloped Oysters  Chicken Salad

Mashed Potatoes

Frozen Pudding  Harlequin

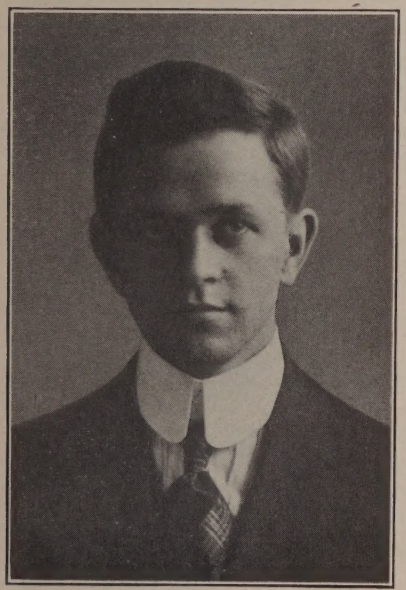
Coffee  Cigars

The balance of the evening was taken up with an exhibition of some of the latest photo plays and dancing. At 10.30 p. m. the last dance was over and the affair voted the best ever held.

## EXECUTIVE OFFICE

P. R. Brennan, *Correspondent*

Ernest McLeod—member of the accounting department of the executive office, and First Sergeant of C Company, 8th Regiment, Massachusetts National Guard, died April 3rd after an illness lasting more than a year.



ERNEST McLEOD

Ernest, as he was known to us all, was one of the most thoroughly liked fellows in the office, a hard and earnest worker, and a true soldier, as was exemplified by the manner in which he faced death. Despite the fact that he suffered intensely throughout his entire sickness, and underwent several painful operations, his father informs us "that he died like the little soldier that he was."

Members of the Malden companies may remember him as being present at the talk which Mr. A. Tenney gave on his experiences at Plattsburg a year ago, as Ernest at that time was present in full uniform and explained the use of the soldiers kit.

The funeral, an impressive military one, was held on the day Congress declared war. Several members of the accounting department were present.

It is not too much to say that in Ernest, Massachusetts has lost one of her ablest soldiers, and we who knew him, a good comrade and a staunch friend.

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W. F. Kimball, assistant engineer in the electrical department, is at the time of writing, confined to the hospital with a serious illness, and we sincerely hope that his recovery may be rapid and complete.

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Many times during the month of April has the purchasing department been called upon to purchase flags and equipments. From conversation with the various dealers, it is quite evident that a wave of intense Americanism is sweeping the entire country.

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The following is an extract from a talk by John Wanamaker:

### CAUSES OF FAILURE

The cause of failure may be any one of this dozen of little things that after all are not little things:

1. He forgets that his worth is manifest by what he produces.

2. He finds excuses for NOT DOING, instead of finding ways to DO what should be done.

3. The world goes ahead in almost every direction, and he keeps on the humdrum turnpike, where sombody will have to pay the tolls.

4. He is not observant, accurate or thoughtful.

5. He is sailing by the broken compass of chance.

6. He flatters himself by viewing himself in his own mirror, instead of measuring himself with others that have passed him in the race.

7. He thinks nobody notices that he has fallen behind.

8. He does not love his work as he expected when he began; and therefore his enthusiasm has been lost.

9. He puts off too many things until tomorrow.

10. He is unconscious of being idle much of his time, and lets the day go by, lacking the results he could have attained.

11. His lack of thoroughness blocks leadership.

12. However honorable, he fails to realize that his example effects others.

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Hard work and brains are Charles M. Schwab's certain recipes of success.

"I have always felt that the surest way to qualify for the job just ahead," he said in his book, "Succeeding With What You Have" (Century Co.), "is to work a little harder than anyone else on the job one is holding down. One of the most successful men I have known never carried a watch until he began to earn $10,000 a year. Before that he had managed with a nickel alarm clock in his bedroom, which he never forgot to wind.

"Young men may enjoy dropping their work at 5 or 6 o'clock and slipping into a dress suit for an evening of pleasure; but the habit has certain drawbacks. I happen to know several able-bodied gentlemen who got it so completely that now they are spending all their time, days as well as evenings, in dress suits, serving food in fashionable restaurants to men who did not get the dress-suit habit until somewhat later in life.

"And working, specialized brains are also needed. Captains of industry are not hunting money," Mr, Schwab goes on. "America is heavy with it. They are seeking brains — specialized brains — and faithful, loyal service. Brains are needed to carry out the plans of those who furnished the capital."

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## THE TERRORS OF ENGLISH

If an S and an I, and an O and a U,
With an X at the end spell Su,
And an E and a Y and E spell I,
Pray what is a speller to do?
Then if also an S and an I and a G
and a H E D spell side,
There's nothing much left for a
speller to do,
But go commit siouxeyesighed!

—*Hotel Register.*

---

How many have read the resolutions of the First Congress adopting the Stars and Stripes as the national flag, a framed copy of which is hanging in the corridor of the Executive Office.

This declaration is headed:

"The Stars and Stripes."

"Declaration of Congress, June 14, 1777.

"Resolved that the flag of the thirteen United States be thirteen stripes alternate, red and white, that the Union be thirteen stars, white in a blue field representing a new constellation."

Everybody should take the time to read it.

## MONTPELIER & BARRE LIGHT AND POWER CO.

L. B. Provost, *Correspondent*

The danger of damage to the hydraulic stations from ice and high water for the present spring, has probably passed. The only trouble that was encountered was at No. 5 plant, where the generator room was flooded, as a result of an ice jam below the station. A few of the armature coils were wet, as was the cable that runs from the generator to the switchboard. This caused the machine to be out of commission for two days.

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A net gain of 116 H.P. was made during the month of March. This makes a gain of 404 H.P. since January first.

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One of our display windows is being used by the Red Cross Society. They are also using one of our electric sewing machines.

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Joseph Pierce, district manager at Graniteville, was unable to read all of his meters last month on account of the deep snow. He tried to reach some of the customers near Washington, but was stopped by drifts. He learned afterward that the road had not been used for several days.

---

Miss Maroni is now doing part of the work on the consumers' ledgers. Her place as teller has been taken by Paul Clogston.

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The new runners which were placed in the water wheel at No. 8 plant, have increased the output 90 K.W.

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Chief Engineer Lawrence reports that so far this spring, he has been able to carry nearly 50% more load at No. 1 plant than in previous years. This increased efficiency is due to the fact that a building was erected last year over the penstock tubes. By placing stoves in this building, it is possible to keep ice from forming in the tubes.

---

A new argument for not using electricity was given to our solicitor last week. A woman refused to have her house wired because a friend of hers has been ill ever since starting to use electricity. The solicitor discovered that the friend lived in another town, and immediately assured the woman that *our* electricity would not act that way.

---

G. E. Thompson, operator at No. 7 plant, has resigned, and his place has been taken by G. H. Bruce.

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The K.W.H. generated and the gross revenue for the month of March were the largest in the history of the company.

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## PEOPLES GAS & ELECTRIC CO.

W. M. Borden, *Correspondent*

On Thursday evening, April 19, 1917, the members of the Employee's Club sat down to a fine steak supper. After the remains were cleared away, Capt. Goolrick of the Coast Artillery Corp gave an interesting talk on the European War and on our lack of Preparedness. There were many questions asked him relative to enlistments and the probable duration of the war, all of which were answered in full detail.

---

The trout fishing season has opened and already our piscatorial

artists are telling about the big ones they hooked and lost.

Our two new generators were put in service April 6th, and are giving good service. They are 225 K.W.—2300 Volt 70 Amp. 60 cycle—180 R.P.M. and are operated by Morgan-Smith water wheels.

Mr. Robt. Fish of the office force has been called to active duty in the Navy. Mr. Fish is a member of the fleet reserve and is the type of young man that the Navy needs at this time.

Mr. Clarence Jermyn of Oswego has accepted the position of teller during Mr. Fish's absence.

The members of the Employee's Club are planning on having a baseball team this season, and entering the Industrial League. Practice has already started, and the boys are showing all kinds of class.

Our appliance store is undergoing extensive repairs and should be completed within two weeks. When finished it will be thoroughly modern, equipped with "up to the minute" gas and electric appliances.

The naval militia company of Oswego, which was sent to New York City is being well remembered by the citizens left at home. One prominent candy manufacturer sent the boys a piano box full of chocolates, while others have sent many gifts of cigars and tobacco.

## SPRINGFIELD GAS LIGHT CO.

LLOYD GALBRAITH, *Correspondent*

The league to which our team belongs has been organized for the season. We will begin practising this month and expect to put a good team in the field. Malden and the executive office please note.

Miss Mary Garner, who has been employed in our office for a number of years has resigned. Her co-workers presented her with a pendant and pin set with pearls and sapphires.

Merle Kendrick has left us to follow his musical calling. He was presented with a gold watch chain and box of cigars.

Among our employees who have answered their country's call are John Shea, William Obin and Arthur McLaughlin.

Among the fishermen who ventured forth on Patriots' Day were A. H. Anderson, street foreman, R. E. Oliver, garage foreman, S. K. Rich of the superintendent's office, and Malcom U. Arthur of the drafting department. Anderson returned with four pretty brook trout, Rich with one, and Artie and Bob returned in tears, as ever.

William Sheehan has been absent the past week with an attack of the "German" Measles. It seems he is up to times.

### Contributed

With the return of Commodore Burgi from the south and the arming of the Gunboat Pioneer to repel attacks by submarines in the river; with Capt. Anderson's Rifle Club knocking bulls eyes to smithereens to protect us by land; all we need is an aeroplane to protect us overhead. If Foreman Todd can be induced to operate it after we get one, we shall feel perfectly safe.

# Charles H. Tenney & Co.

American Tar Co., Boston, Mass.

Barre and Montpelier Traction and Power Co., Montpelier, Vt.

Boston Electrolytic Oxygen Co., Boston, Mass.

Concord Electric Co., Concord, N. H.

Exeter and Hampton Electric Co., Exeter, N. H.

Exeter, Hampton and Amesbury Street Railway, Hampton, N. H.

Fitchburg Gas and Electric Light Co., Fitchburg, Mass.

Haverhill Electric Co., Haverhill, Mass.

Malden Electric Co., Malden, Mass.

Malden and Melrose Gas Light Co., Malden, Mass.

Montpelier and Barre Light and Power Co., Montpelier, Vt.

Peoples Gas and Electric Co. of Oswego, N. Y.

Penacook Electric Light Co., Penacook, N. H.

Rockland Electric Co., Closter, N. J.

Rockland Light and Power Co., Nyack, N. Y.

Salem Electric Lighting Co., Salem, Mass.

Springfield Gas Light Co., Springfield, Mass.

Suburban Gas and Electric Co., Revere, Mass.

The Bristol and Plainville Tramway Co., Bristol, Conn.

## TENNEY SERVICE ASSOCIATION

Officers, 1916-1917

FRANCIS L. BALL, President

GEORGE D. BAXTER, Vice-President

PALMER YORK, Secretary

CLIFTON R. HAYES, Chairman Committee on Policy and Management

W. H. BRADLEY, Chairman Gas Appliance Committee

JOHN WEST, Chairman Electric Appliance Committee